REMARKS

Applicant appreciates the thorough examination of the present application as evidenced by the Office Action mailed May 18, 2006 (hereinafter "Office Action"). In response, Applicants have amended independent Claims 1, 10, and 19 to clarify that n (the number of bits of the input data word) is less than or equal to k (the modified input data word is (k+m) bits where m is the number of bits in an error checking code calculated using at least a first portion of the modified input data word). Applicant has also amended dependent Claims 8, 17, and 26 to be consistent with the amendments to independent Claims 1, 10, and 19, respectively. New dependent Claims 28 - 42 have also been added. Applicant respectfully submits that the cited references fail to disclose or suggest, among other things, all of the recitations of independent Claims 1, 10, and 19 as amended. Accordingly, Applicant submits that all pending claims are in condition for allowance. Favorable reconsideration of all pending claims is respectfully requested for at least the reasons discussed hereafter.

The Drawings

The drawings stand objected to because FIGS. 1 - 3 are not labeled as Prior Art. In response, Applicant submits amended FIGS. 1 - 3 herewith in which FIGS. 1 - 3 have been labeled as Prior Art.

The Abstract

The abstract stands objected to as allegedly being non-descriptive. In response, Applicant has replaced the current abstract with a new abstract.

Independent Claims 1, 10, and 19 Are Patentable

Independent Claims 1, 12, and 13 stand rejected under 35 U.S.C. §102(b) and §102(e) as being anticipated by U. S. Patent Nos. 7,028,248 to Chen et al. (hereinafter "Chen"), 6,721,919 to Morioka et al. (hereinafter "Morioka"), and 5,428,629 to Gutman et al. (hereinafter "Gutman"). (Office Action, page 1). Independent Claims 1, 10, and 19 are directed to a method, a system, and a computer program product for generating at least one error checking code. For example, independent Claim 1 recites:

> creating a modified input data word, comprising (k+m) bits, by combining an input data word, having n-bits, with at least a previously calculated at least one error checking code, comprising m-bits, where $n \leq k$; and
>
> calculating a first m-bit error checking code from at least a first selected portion of the modified input data word.

Claims 10 and 19 include similar recitations. Thus, according to Claim 1 as amended, the number of bits of the input data word n is less than or equal to k, where the modified input data word is (k+m) bits and m is the number of bits in an error checking code calculated using at least a first portion of the modified input data word.

Turning first to Chen, FIG. 3 of Chen shows an expected input data word 300 that comprises nm bits. In sharp contrast to the recitations of independent Claims 1, 10, and 19, however, Chen does not disclose or suggest that an input data word may be received that has fewer bits than the expected data word 300. Therefore, Chen does not disclose or suggest that the input data word 300 having, for example, n bits can have fewer bits than an expected input data word width of, for example, k bits. Therefore, Chen does not disclose n being less than or equal to k as recited in independent Claims 1, 10, and 19.

Turning next to Gutman, this reference describes with reference to FIG. 7 computing an error checking code $C_D(x)$ on a difference message representation provided by block 70. The difference message representation always contains data of the same width and a number of zeros as only the DLCI information changes in the received message m(x). (Gutman, col. 7, lines 37 - 42). The difference message representation is the difference between an original data word and an altered data word, where the DLCI information has been altered. Therefore, this document does not disclose or suggest creating a modified input data word by combining an input data word with at least a previously calculated error checking code as recited in independent Claims 1, 10, and 19. Furthermore, the number of bits n in the input data word cannot be less than k, which is the width of the expected data word, as the input data word, which is the difference portion 58 shown in FIG. 6, has a known and fixed width. Gutman does not contain any disclosure or suggestion that the input message M(x), C(x) to the system of FIG. 7 can contain a number of bits that is something other than an integer multiple of an expected number of bits.

Turning next to Morioka, this reference does not disclose or suggest creating a modified input data word by combining an input data word with at least a previously calculated error checking code as recited in independent Claims 1, 10, and 19. As shown, for example, in FIG. 1, a modified word output from the encoder/decoder 10 is derived from the information word to th encoded or received word. A linear operation circuit 11 and an adjustment circuit 12 provide data to the linear operation circuits 13 - 16, but these circuits do not create a modified input data word by combining an input data word with at least a previously calculated error checking code. As discussed in the Specification, this aspect of the present invention may allow, for example, a parallel CRC code generator of fixed width to produce a CRC code for the data word of unknown length, including a data word that does not comprise an integer multiple of k bits.

Accordingly, for at least the foregoing reasons, Applicant respectfully submit that independent Claims 1, 10, and 19 are patentable over the cited references and that Claims 2 - 9, 11 - 18, and 20 - 42 are patentable at least as they depend from an allowable claim.

CONCLUSION

In light of the above remarks, Applicants respectfully submit that the above-entitled application is now in condition for allowance. Favorable reconsideration of this application, as amended, is respectfully requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (919) 854-1400.

Respectfully submitted,

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